



Temple Fish Sanctuaries: Last bastions of native fish and pristine river stretches

Like the world over, native freshwater fish in India are declining rapidly. Crucial reasons for this decline are destruction of habitats through hydrological modifications, pollution and unsustainable fishing practises. Dams in India have converted flowing rivers into reservoirs, which have completely different hydrological character than rivers to which indigenous species have adapted to. Species like Indian Shad (*Hilsa hilsa*), carps (*Labeo calbasu*) and catfish (*Bagarius bagarius*) have been severely affected by these changes. Mahseer or *Tor* species which swim several kilometres upstream to spawn (breed) in clear water streams or upstream stretches of rivers have been nearly wiped out of our rivers due to several blockages in their spawning route and severe fluctuations in water levels, including no water in summer months! Rivers and reservoirs are now dominated by exotic fish like Tilapia, silver carps, grass carps, African catfishes which tolerate high pollution and static water levels.

A flowing river provides numerous habitats for a variety of fish. Different fish species are found in niches like riffles, runs, deep pools, riparian stretches, floodplains, and estuaries. Fish require flood pulses and drought signals as spawning cues. Temperature and light penetration are also important factors for their sustenance. Dams and barrages affect ALL the above factors, destroying these habitats. On the other hand, dams are stocked with fingerlings of exotic fish species by the Irrigation and Fisheries Departments which are suitable for the static water levels in reservoirs. These exotic fish compete with the local riverine fish species and outnumber them. The tenders issued for fishing in reservoirs are mostly monopolised by powerful external contactors. The inherent equity of riverine fisheries due to the distribution of various fish at different distances has been severely marred through this. Though aquaculture has led to the increase in population of some carp species like Rohu, catla, mrigal, etc, most of the produce is channelized to urban markets and does not contribute to the protein-poor diets of subsistence fisher folk.

“Evidently freshwaters of India have been viewed from a single perspective; that of economic production. They are to be sources of irrigation or urban-industrial water supply or of hydel power; they are to receive sewage and industrial waste; they may produce edible fish. In this strictly utilitarian framework there is no space for conserving the rich heritage of freshwater fish diversity of the country; nor for sustainable use of fish as a protein source for the weaker segments of the society.”
-Where have all the fish gone? Madhav Gadgil, et al, 2001

At the same time, there are some gems of community conservation which protect not only rare native fish species, but the entire riverine habitats through simple, participatory measures, without any infrastructure development or external funding. Today, these ***community conserved fish sanctuaries are some of the very few places where we can see native fish and undisturbed river stretches. Most of these are temple sanctuaries, managed by the riparian temples and devotees for centuries.*** These small temple sanctuaries are nestled along river banks in many states of India. Notably, Karnataka and Uttarakhand still have many such thriving sanctuaries. Dr. Shyama Bhat Kolari, Rtd. Joint Director of Fisheries, Karnataka, has documented 35 such fish sanctuaries in his booklet ‘Development and Management of Freshwater Fish Sanctuaries in India’. This number is likely to increase with more research. Some good news is that new community conserved

sanctuaries are being set up in remote areas like Seethanadi by enthusiastic local communities. There is an urgent need to conserve these last bastions from pressures like hydrological fluctuation through dams planned in upstream and large scale pollution through industries.

A snapshot of some of these sanctuaries: **Shringeri Fish Sanctuary, Tunga River, Chickmagalur:** Shringeri Math, established nearly 1200 years ago on the banks of River Tunga hosts a fish sanctuary teeming with endangered Sahyadri Mahseer fish, *Tor khudree*. According to a report by IISc (Prof. Gadgil, et al, *Status of Karnataka Biodiversity: Aquatic Biodiversity*, CES, IISc) the sanctuary supports nearly 38 fish species, with 50% Mahseer.

The sanctuary is managed by Sharada Temple and Shankaracharya Matha. Devotees offer puffed rice to huge congregations of fish in the river and worship them as the 'Meen avatar' of Lord Vishnu. Sahyadri Mahseer is known as Bilimeenu in the local language and though it is a prized game and table fish, it is not consumed or caught in the area. Catching these fish is supposed to be a crime against god and a 2 km stretch upstream and downstream of the temple banks is a 'no fishing zone'. Significantly, no modifications have been made on the river banks by the temple authorities, so that the natural river morphology with sandy banks and islands is maintained. River Tunga is swift and fast flowing in the area, with crystal clear water and very little pollution. This is an ideal habitat for the endangered fish. The area is not yet declared a Fish Sanctuary by the Government of Karnataka and the temple authorities wish that the area should get some formal protection. Of course, such a fish sanctuary should not only protect the fish, but the entire river stretch, with its fast flowing, unpolluted water.



Above: Shringeri Fish Sanctuary Photo: Parineeta Dandekar



Above: Devotees feeding the fishes Photo: Parineeta Dandekar

Chippalgudde Matsya Dhama, Tunga River, Teerthahalli:

In the neighbouring town of Teerthahalli, Chippalgudde Fish Sanctuary is hidden in a tangle of Western Ghat forests, on the banks of Tunga. Chippalgudde hosts a beautiful Siddhivinayak Ganapati Temple and the Bhats who manage this Siddhivinayaka temple trust, also manage the adjacent fish sanctuary, 4 kilometre protected stretch of Tunga river. Devotees buy puffed rice for the fish from the Bhats themselves and one can see confiscated fishnets hanging at their residence. Siddhi Vinayaka Seva Samithi has built platforms on the river bank for feeding the fish. It is a very nondescript infrastructure and does not affect the river morphology. Riparian vegetation is thick on both banks and the locals are replete with morbid stories about the dire outcomes of killing Mahseer from the Tunga waters.



Above: Chippalgudde Matsya Dhama, River Tunga Photo:Parineeta Dandekar



Above: The Siddhivinayaka Temple Photo: Parineeta Dandekar

The tiny stretch protects more than 27 species of fish and significant species include the endangered Mahseer and *Puntius pulchellus*, the only indigenous herbivorous fish in our country

The deep pools, fast flowing, perennial waters, sandy banks and riparian vegetation provide excellent habitats for native fish. Chippalgudde is not a declared fish sanctuary and such a declaration may be necessary to maintain not the fish, which have sustained through community conservation for ages, but the fragile riverine habitat, which is under pressure.

Shishisla Matsya Teertha, Kapil/Kumardhara River, Dakshin Kannada:

Shishileshwara temple, on the banks of river Kapila in Dakshina Kannada district of Karnataka hosts one of the richest temple fish sanctuaries in India. Shishila Temple Fish Sanctuary was declared a protected area in 1930, perhaps the first fish conservation and protection order in the Country.



Above: Shishileshwara Temple on the banks of River Kapila Photo: With thanks from <http://www.flickr.com/photos/madhukr/>



Above: River Kapila at Shishila. Photo: With thanks from: <http://www.flickr.com/photos/pchethan/>

Shishila Fish sanctuary supports more than 18 fish species, with a majority of Deccan Mahseer, *Tor khudree*. The sanctuary is important for a number of reasons. In 1996, due to local group clashes on fish catch, the river stretch was poisoned with pesticides and the entire village and vicinity was dependent on water tankers for drinking water. All the fish from the sanctuary died in this incident and it is said that nearly fourteen truck loads of fish, collected by over 750 people, were buried. This

gave rise to the Matsya Hitharakshan Vedike, an informal organisation that looks after the protection and management of fish, along with Temple Authorities. The villagers were shaken by the death of their sacred fish and built a fish memorial to commemorate this unfortunate incident. Since then, fish populations have risen, but have not reached the pre-1996 numbers.

A speciality of the region is the indigenous practise of making small bunds in the river, known as 'kattas,' for riparian irrigation. These bunds are made entirely using local material and local labour. Around 10 kattas are built by the villagers at the onset of summer months across the river and they supply water to the riparian fields by gravity. It is observed that when the katta-making begins, the Mahseer congregate near the temple or further upstream. In monsoon, these Kattas are broken to maintain free flow of the river.



Above: Congregation of Deccan Mahseer at Shishila. Photo: With thanks from: <https://picasaweb.google.com/mgrishi>

Karnataka alone has more than 17 temple fish sanctuaries including Hariharapura at Koppa, Bachananayakagundi and Dharmasthala at Dakshin Kannada, Jammataji Agrahara at Chikmagalore, Ramanathapura at Hassan, Thingale on Seethanadi, etc. Thingale Temple Sanctuary is a newly constituted sanctuary, set up by a bhajani mandal on the banks of Seethanadi, near Agumbe, which is very rich in biodiversity.

Such temple fish sanctuaries are not limited to Karnataka, but are found all over the country. Kapileshwar, Mangalnath and Sahasradhara Temples in Madhya Pradesh, Alandi, Dehu and Pandharpur in Maharashtra, Haridwar, Rishikesh in Uttaranchal were thriving fish sanctuaries few decades back. If we look at the quality and quantity of water at these places today, it is difficult to believe that Mahseer, a fish which prefers clear, fast flowing waters, ever resided here. Such is the fate of our rivers today.

In Uttarakhand too, temple fish sanctuaries have been protecting different fish species for a long time now.

Baijanath temple, Gomti River, Kausani, Uttarakhand: The Baijanath Temple complex on the banks on River Gomti in Uttarakhand supports a small fish sanctuary on its banks. Fishing is prohibited in these waters. Main fish seen here too is Mahseer, though the Himalayan species, *Tor putitora*. However, temple authorities in these places do not show the level involvement and active conservation as seen in temples of Karnataka. (With thanks from Malavika Chauhan, Himmothan)

Many isolated fish sanctuaries are also reported from the Ramganaga and Kosi are near Corbett. However, it is also reported that now these sites are used by anglers and the temples receive good revenue in return.



Above: Mahseer congregation at Baijanath Photo with thanks from: Malavika Chauhan



Above: Baijanath Temple along the Gomti Photo: <http://www.uttarakhand.ws/v/pilgrimage-temples/baijnath/>

Machchiyal Lake, Uhl River basin, Himachal Pradesh: In Jogindernagar, a town in Mandi district of Himachal Pradesh, lies a lake known as Machchiyal, fed by River Uhl. This lake is supposed to be the abode of Machendru Devta, the Fish God. Fish are fed and worshipped here regularly and fishing is strictly prohibited in the lake. Machchiyal supports a large population of the Himalayan Mahseer. There is a Temple of Machendru Devta on the lake bank with ancient idols of fish-god.

Management of Fish Sanctuaries:

In Himalayas, apart from large dams poised to convert rivers like Ravi and Satluj into dry channels, another threat to these fish is increasing angling activities. Even if we agree to the claims of the angling organisations that they practise catch-and-release angling, it is not always true. There is next to no monitoring of anglers, their catch and what they do with it. Though, it has to be noted that many angling associations are now supposedly working towards conservation of Mahseer and Trouts to aid their revenue.



Above: Golden Mahseer caught at an angling camp from Ramganga. Photo: from http://www.go-fishing-worldwide.com/hosted_india.htm

We can see that community conservation efforts have the potential to protect native fish and their rivers for centuries. Looking at the rapid and irreversible damages done to our rivers, the need to conserve these last bastions becomes very urgent. India has only a few notified river sanctuaries, like National Chambal Sanctuary, Sone and Ken Sanctuaries, etc., but these too are falling prey to pressures like dams which regulate and modify these rivers, converting a self sustaining ecosystems to an externally controlled reservoirs. No fish are listed in the schedules of protected species in the Wildlife Protection Act. The fisheries Act of India of 1897 focuses exclusively on management of edible fishes. There is a very urgent need to maintain environmental flows from the existing dams and barrages so that downstream riverine fisheries can be revived, at the same time, there is a need to protect these temple sanctuaries as ecologically sensitive areas and ensure that there are no major hydrological modifications or pollution will affect these rare pockets.

We have very few pristine river stretches and native fish left and it is our responsibility to protect them.

References and further reading:

- Shyama Bhat Kolari, Joint Director of Fisheries (Retd), Karnataka, *Development and Management of Freshwater Fish Sanctuaries in India*
- Madhav Gadgil, H.N. Chandrasekhariah and Anuradha Bhat, 2001, *Where have all the fishes gone?* Centre for Ecological Sciences, Indian Institute of Science,
- S. Kumar Chaudhary, *Freshwater Fish Diversity Information System as a Basis for Sustainable Fishery*, Department of Library and Information Science, Jadavpur University,
- Kharat, S S, N Dahanukar and R Raut, 2000, *Decline of fresh water fishes of Pune urban area*. J. Ecol. Soc. 13-14: 46-51.